Surreal Maths Using Sets

By Peter David Smith

Two plus two equals five?

In fact two plus two can equal five or any other number you like, just so long as the things being counted have a numerical value of more or less than one.

How should we define “a number”?

Numbers are things being counted and numbers are also the symbols which we use to mark how many we’ve counted so far. Things we are counting might contain infinities within their outer appearance of being a “one” or a “two”.

I know and I understand that there may be other views on the subject of “What are numbers?” I realise that Wittgenstein took a great interest in this subject. Nevertheless, in my opinion, numbers are things being counted.

Wittgenstein used the word “things” in a different way. My usage of the word “things” includes ideas, states of being, phases of a process and so on and so on, as well as perceived physical objects. However, perceived physical objects are themselves phases or stages of metamorphosis. As such an acorn, an oak tree, a pile of lumber, an oak coffee table and a bonfire may all be phases in the four dimensional existence of one thing which fall into the categories of Pre-Tree, Actual Tree and Post-Tree.

I refer to all of these as “things being counted” and each “thing being counted” is a SET.

Each number is a SET which can contain any numerical value.

Two SETs plus two other SETs could equal five if each of the SETs being counted has a numerical value of one and a quarter.

Two lots of one-and-a-quarter plus two other lots of one-and-a-quarter equals five.

We could use brackets or some sort of little pockets.

Ordering goods from an online store we might put different numbers of things in the basket. Then, when we look back at the history of our online orders, we might find that, in January, we made two orders with one item in the basket each time and, in August, we made an order with one item in the basket and another order with two items in the basket. Thus the combined numerical value of two orders plus two orders would be five.

If we made lots of orders with multiple items in the basket each time the numerical value of our total orders would be far greater than the number of baskets. If we made an order of one item and then returned the item for a full refund it would still count as an order because that order will have actually existed, even though in the long run the numerical value of that order turns out to be zero.

So the meaning of numbers is a series of “sets” which, externally, seem like singular units but, internally, amount to the numerical value of whatever items were in “the basket” so to speak.

Two plus two equals zero if the two sets and the other two sets all contain a numerical value of zero. Two plus two equals six if the value of the items in all four “sets” turns out to be four lots of one-and-a-half.

Another example would be if we are counting boxes in a warehouse but the boxes don’t all contain a standardised number of items. Two boxes plus two boxes equals an unknown number of items until we unpack those boxes.

So, what does all of this apparent trivia actually mean?

It means numbers mean nothing at all until we know the contents of the things being counted.

We can look at the enemy through binoculars and count the numbers of their tanks but we still need to know how many of those tanks are three-dimensional war machines containing real live soldiers and how many are two-dimensional cardboard tanks containing straw men.

It applies to four-dimensional information too.

Consider the relationship between chickens, eggs and dinosaurs.

If one “set” or container of information holds the entire history of eggs being laid by the species of reptile which evolved into a chicken, then these eggs were being laid by many different creatures going through a continuous process of metamorphosis over millions of years. If another “set” of information contains the entire knowledge of chickens (as chickens) laying eggs then that package of information is difficult to separate from the other one because how can we choose a moment in time when the animal definitively stopped being a reptile and how can we identify the moment when it became a chicken?

So a third set contains the information of all the egg laying creatures, in between, who were neither dinosaurs nor chickens but were some sort of transitional proto-bird.

A fourth set contains whatever the creature was before it was a dinosaur and a fifth set contains what it could potentially become in some imagined future.

Adding these five sets of information together gives us a result which defies enumeration because the variables in it are hitting a complexity singularity.

One thing we can definitely say is that the egg came a long time before the chicken.

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